INDUSTRIAL SCALE IRRADIATION OF RICE AND OTHER FOODSTUFFS (CPR/5/009) D6

CORE FINANCING

YEAR	Experts		Equipment	Fellowships		Scientific Visits		Training	Sub-contracts	Misc. Comp.	Total
	m/d	US $	US $	m/d	US $	m/d	US $	US $	US $	US $	US $
1995	1/ 0	11,400	54,000	-	-	-	-	-	-	-	65,400

First Year Approved: 94 Total expenditure to 30 September 1994: $159,400 (TACF)

OBJECTIVES: To build an industrial scale food irradiation facility for high quality rice and to use it to increase the food supply to Beijing.

BACKGROUND: Several major crops in China suffer losses of 5-20% and more due to insect infestation, mould and sprouting. Production and sale of high quality rice now stops during the season in which infestation is greatest. At the same time, China has recently experienced a significant increase in demand for higher quality foods. Conventional methods of disinfestation involving the use of insecticides or chemical fumigation have detrimental effects on humans and the environment owing to toxicity, and are increasingly restricted. Considerable attention has therefore been given in recent years to the use of radiation to disinfest grains, meat products, beans and seafood, and to increase the shelf life of fruit. The Institute for Application of Atomic Energy, which is the national centre for the application of nuclear methods to agriculture in China, has been involved in research in this area since it was established in 1960, and is now addressing the practical problem of increasing the supply of important food commodities to consumers. A major programme on commercial scale disinfestation of rice was initiated in 1993.

PROJECT PLAN: The immediate goal of the food irradiation programme is to build an industrial scale irradiation facility for high quality rice with a processing capacity of 5000-9000 tonnes per year and to use it to increase the food supply to Beijing. With the facility in full operation, attention will turn to optimizing processing technology, including dosage control, and product quality. An important partnership has been formed between the Institute and the Beijing Jihlian Cereal Products Company, which will be responsible for distribution of the irradiated products.

NATIONAL COMMITMENT: The total cost of the project is estimated to be $1,331,300, of which the Government will provide $1,015,500. This will cover all facilities, materials and supplies, and essentially all personnel required for the project. Once the project is completed, the Government is committed to providing the support necessary for its continued operation.

AGENCY INPUT: Expert services in hygienic standards and microbiology and international trade standards; basic equipment, including a 100 kCi cobalt-60 radiation source.

IMPACT: Losses due to infestation of rice and other foodstuffs, such as other grains, chestnuts, potatoes and rice, are in the range of 10-20%. In view of the large quantities involved, the economic impact of eliminating or even significantly reducing such losses would be very large. The population would also benefit from an improvement in food quality. This project will lay the foundation for extensive use of food irradiation in China, a major step toward realizing large gains in food productivity and quality.